



# STORET and the Water Quality Exchange

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OWOW/AWPD/MB  
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# The STORET Program

- STORET: STOrage and RETrieval of water quality monitoring data



- EPA's STORET Program:
  - promotes sound data management practices
  - stores and maintains water quality data submitted by agencies/groups across the nation in the STORET Data Warehouse

# The National STORET Data Warehouse

- A national repository of water quality monitoring data – “Modernized STORET”
- Stores water data of all types (biological, chemical, physical) submitted by states, tribes, watershed groups, other federal agencies, and universities
- Web-enabled: Data are available -- and can be submitted -- using the Web
- Encourages data sharing at a national level

# Water Quality Monitoring Data

- Raw monitoring results along with information about
  - Where sample/measurement was collected
  - When it was collected
  - What was collected
  - How it was collected
  - Why it was collected
  - Who collected it



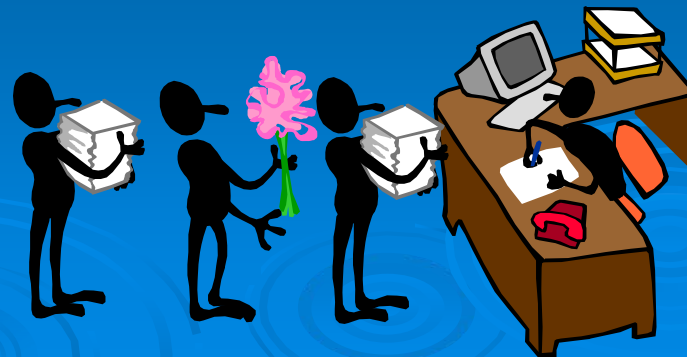
# STORET Terms

- Projects (Why data were collected)
  - Brief summary of monitoring plan
- Stations (Where data were collected)
  - Describe where monitoring takes place
- Results (When, How and What data were collected)
  - Measurements of what was monitored



# Who Puts Data in?

- State environmental agencies
- Tribal environmental agencies and groups
- Volunteer groups and watershed organizations
- Universities



# Managing Data Locally

- Data sharing at a national level benefits from:
  - Well documented data at a local level
  - Well managed data at a local level





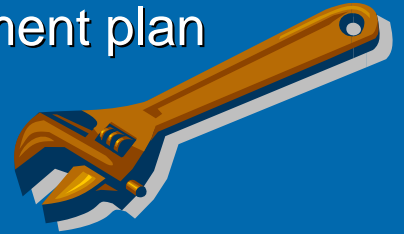
# Well Managed Data

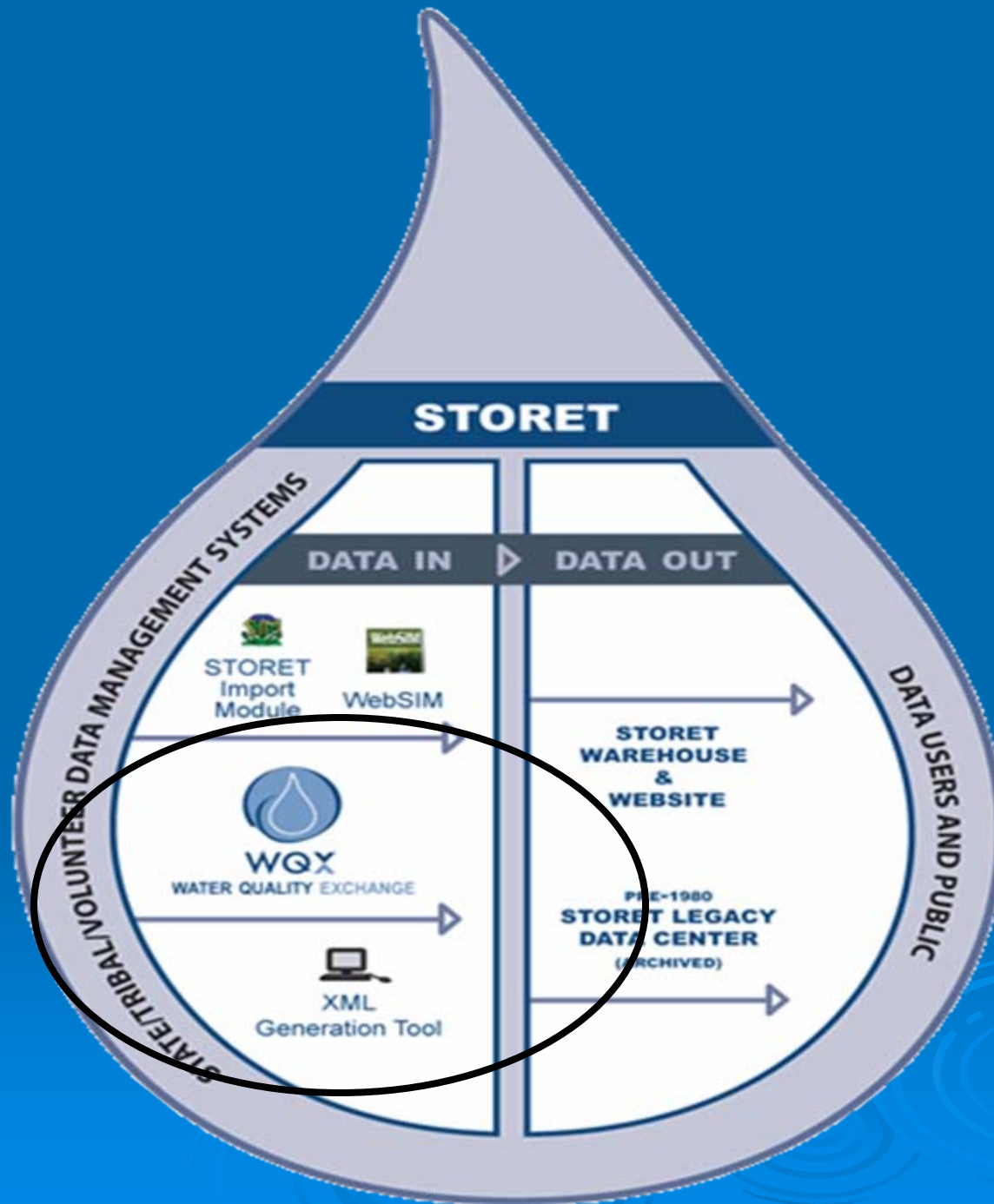
- Placing data and metadata in a manageable electronic format provides many benefits:
  - Electronic input forms can help ensure data are in the correct range or format
  - Metadata helps you make comparisons between samples or over time by capturing context of the sampling event
  - Quality assurance results can be compared to expected results
  - Your data can be used by others and safely stored for future use



# Managing and Sharing Data

- Organizations from around the country put data into the STORET Warehouse
  - Good Data Management requires everybody in the organization to ask: 'How will these data be stored and shared?'
  - Every organization should have a data management plan
- Some tools that help:
  - Distributed STORET Database
  - Web tools for data submission to the STORET Warehouse
  - Water Quality Exchange







# What is WQX?

- The Water Quality Exchange (WQX) Version is a new way of sharing water quality monitoring data.
- WQX uses the latest in internet technology and relies on a pre-defined data-sharing format or “schema.”
- The schema allows for anybody to share data regardless of what the original source of the data was.

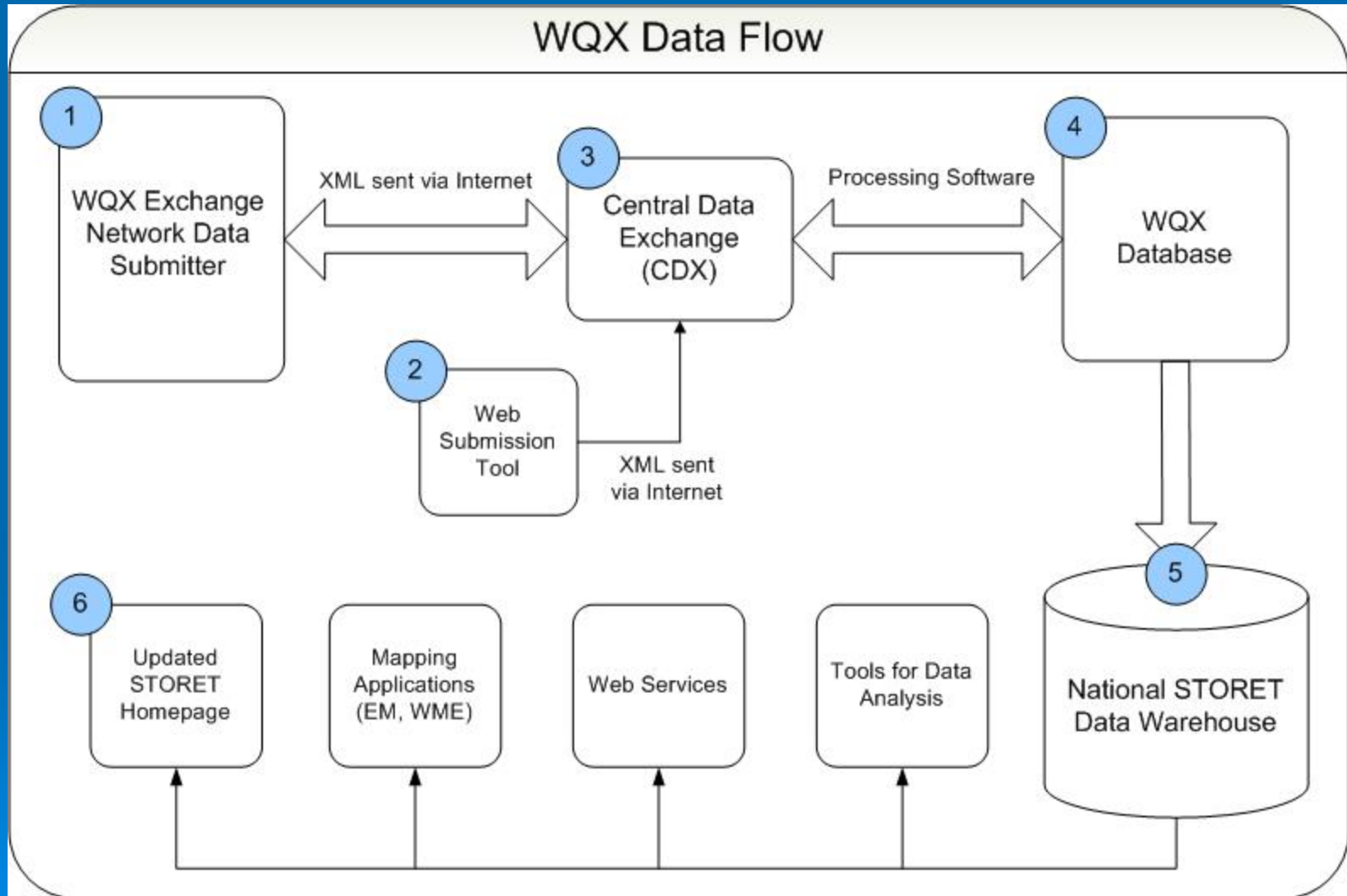
# WQX Status

- WQX went on-line on February 15th, 2007, and is ready to receive data
- Several states and tribes have successfully submitted data to WQX

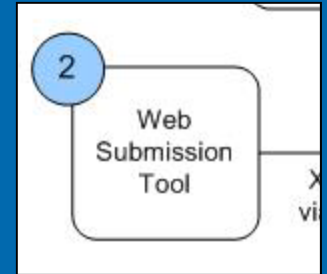
# WQX Schedule

- WQX Version 1.0 data flow in production (Feb 07)
- Add Biological/Habitat data to schema (May 08)
- Develop Web tool for XML Generation
  - Final tool, including Bio/Habitat (Sept 08)
- Distributed STORET will be completely phased out by September 2009

# How does WQX work?



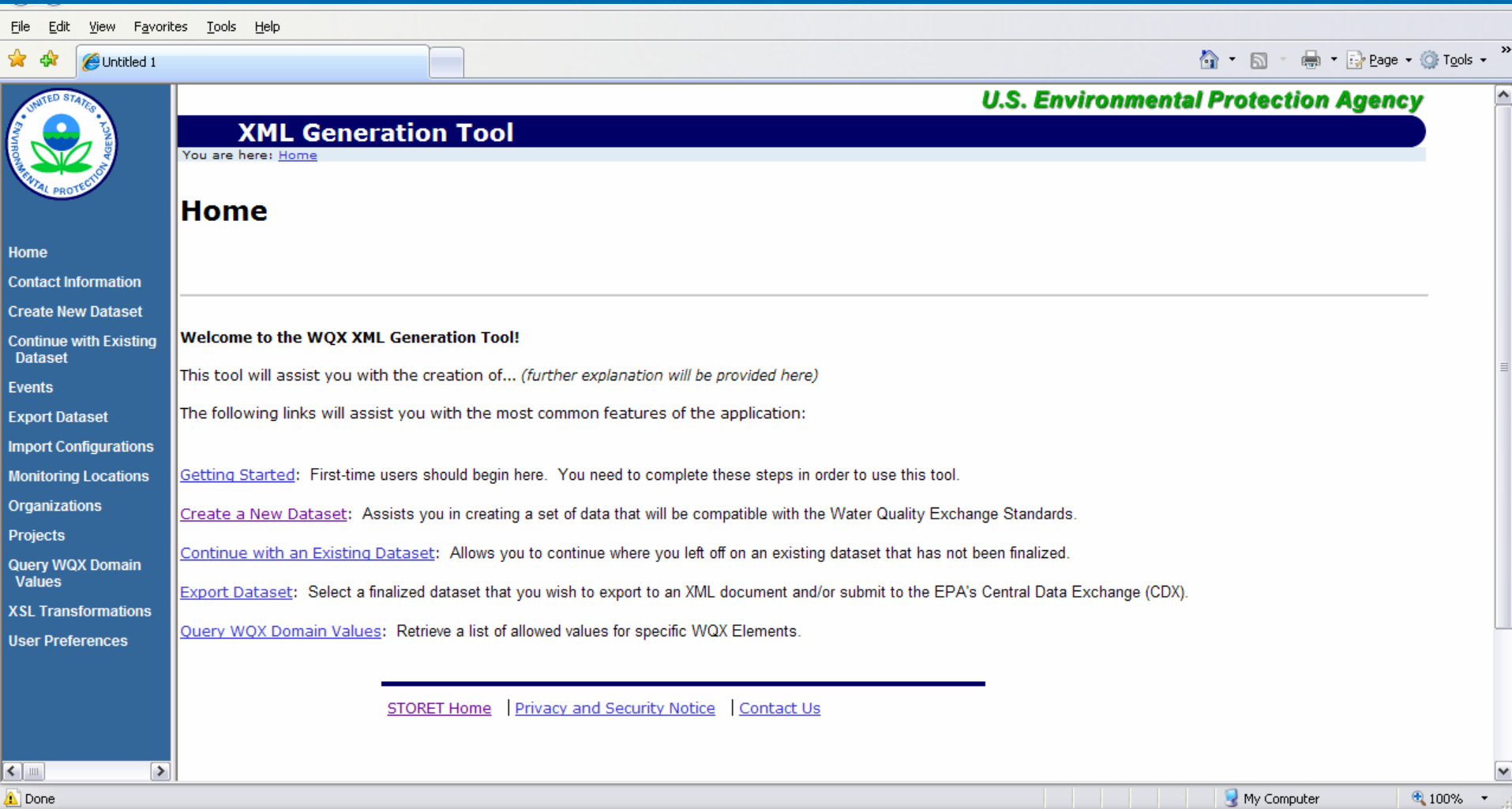
# New Ways for Volunteers to Share Data



- EPA is currently designing a web submission tool that will provide an easy method for sharing data through the STORET warehouse.
- The tool will be easy to use and accept basic input formats (i.e. Excel Spreadsheets).
- Data submitted via this tool will be available on the internet within one week of submission.



# New tool for sharing data



*We need a new name for this tool!*

# STORET Warehouse Updates

- The National STORET Data Warehouse enhancements for improved data accessibility
  - New Watershed Summary – Available Now
  - New Web Services – Available Now
- Please visit the STORET website for more information : [www.epa.gov/storet](http://www.epa.gov/storet)



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## Results by Watershed

Drainage Basin/HUC

10190003 - Middle South Platte-Cherry Creek

Search By



Organization



Characteristic Type

Query

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\*Watersheds with data.

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Last updated on Friday 16th March, 2007

URL: <http://iaspub.epa.gov:80/WatershedSummaryUI/watershed.do>

## Results by Watershed

## Drainage Basin/HUC

10190003 - Middle South Platte-Cherry Creek. ▼\*

## Search By

☒ Organization ☐ Characteristic Type

Query

10 Organizations, 109 Stations, 486 Characteristics, 153,998 Results

## Organization

☐ All Organizations of the Watershed☒ 21CO0001 - Colorado Dept. of Public Health & Environment 01/01/1901 - 06/07/2006 (54037) Records• [66 Stations](#)• [13694 Metal](#), [2703 Microbiological](#), [9836 Nutrient](#), [5268 Other](#), [20 Pesticide](#), [21900 Physical](#), [616 Radiation](#).☐ AURORA - City of Aurora (Colorado) 10/07/1998 - 12/15/2004 (6807) Records• [3 Stations](#)• [1408 Metal](#), [696 Microbiological](#), [1157 Nutrient](#), [378 Other](#), [3168 Physical](#).☐ BRIGHTON - City of Brighton (Colorado) 02/03/1999 - 12/15/1999 (495) Records



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### Station Summary

Hydrologic Unit Code - 10190003

21COL001 - Colorado Dept. of Public Health &amp; Environment

66 Stations

#### Station Information

[000023 - SOUTH PLATTE R AT HENDERSON](#) 01/01/1901 - 07/11/2001 (14214) Records[3785 Metal](#), [706 Microbiological](#), [2202 Nutrient](#), [1464 Other](#), [5868 Physical](#), [189 Radiation](#),[000034 - CLEAR CREEK NEAR MOUTH](#) 01/01/1901 - 05/03/2006 (9133) Records[2247 Metal](#), [503 Microbiological](#), [1491 Nutrient](#), [1054 Other](#), [20 Pesticide](#), [3671 Physical](#), [147 Radiation](#),[000130 - SOUTH PLATTE RIVER NEAR PLATTEVILLE](#) 05/31/1979 - 09/01/1994 (2939) Records[832 Metal](#), [103 Microbiological](#), [512 Nutrient](#), [289 Other](#), [1046 Physical](#), [157 Radiation](#),[000156 - SOUTH PLATTE R AT 19TH ST. IN DENVER](#) 03/03/1994 - 06/07/2006 (4908) Records[2091 Metal](#), [201 Microbiological](#), [790 Nutrient](#), [266 Other](#), [1445 Physical](#), [115 Radiation](#),[0112053796-1 - INLET AFTER HUDSON OFF O'BRIAN](#) 05/02/1975 - 05/16/1975 (44) Records[4 Microbiological](#), [14 Nutrient](#), [6 Other](#), [20 Physical](#),



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# Question/Comments

## ➤ Contact:

- The STORET Team: [storet@epa.gov](mailto:storet@epa.gov)
- 1-800-424-9067

## ➤ Or Visit:

- [www.epa.gov/storet](http://www.epa.gov/storet)
- [www.epa.gov/storet/wqx.html](http://www.epa.gov/storet/wqx.html)
- <http://www.exchangenetwork.net>